

*case study***307
westlake**

*South Lake Union's first
LEED™ Core & Shell
biomedical research facilities*



307 Westlake significantly advances SBRI's life-saving infectious disease research, as dollars saved through the building's efficiencies can be used to move research forward at a faster rate.

"Our whole mission revolves around advancing global health through scientific discovery. We're pleased to be in a facility that was built to respect our environment and our community. It echoes our goal of making the world a better, more healthy place to live."

— Kenneth Stuart, Ph.D.
President and Director
Seattle Biomedical Research Institute

The September 2004 issue of dpdINFO featured a review of Seattle's performance and leadership in sustainable building since becoming the first city in the nation to formally adopt a citywide sustainable building policy in 2000. This month we focus on 307 Westlake, a green building with cost efficiencies that will advance scientific research.

Green Building as a Strategy for Global Health

One of the newest research institutions in Seattle's South Lake Union neighborhood, 307 Westlake, is a state-of-the-art facility that not only delivers value as a long-term real estate investment, but will also provide a healthy environment for its occupants and an opportunity to expand research on global health issues.

307 Westlake was developed by the Seattle Biomedical Research Institute (SBRI) in partnership with Vulcan, Inc. and Harbor Properties. Harbor and Vulcan adopted LEED™—a voluntary, consensus-based national standard for developing high-performance, sustainable buildings—to support a triple-bottom-line philosophy of:

- n meeting development goals to generate a market return on capital investments,
- n strengthening the community and enhancing urban livability, and
- n protecting the environment.

SBRI considers their development and ownership partnership with Vulcan and Harbor a good investment in its future. LEED™ allowed SBRI to create a high-performance building with lower operating costs. As a non-profit funded through grants and gifts, more of SBRI's funding can now be applied directly to research, recruiting, and retaining world-class scientists.

SBRI will occupy the top two floors of the five-story, 113,000 square foot building that features both laboratory and office space and 8,000 square feet of ground floor retail space. This space allows SBRI to expand BioQuest, its science education program focusing on global health, by moving it into the first floor of the building. BioQuest features a science gallery for the general public and a learning lab for local high school students and teachers.

Children's Hospital and Regional Medical Center leased the second and third floors (48,000 square feet) which nearly triple its space dedicated to research on infectious diseases and immunologic conditions affecting children.

The South Lake Union neighborhood is recognized as one of the nation's leading biotechnology and life sciences centers. 307 Westlake occupants will benefit from this location and its spectacular views of Lake Union and the city center. They will also enjoy a working environment that features ample daylight, high-quality electric lighting, superior ventilation, and low-emitting materials.

Saving Money by Creating Healthy Environments

307 Westlake was well into design development in 2002 when LEED™ was introduced into the project. LEED™ reflected the partners' values and goals for development, and LEED™ for Core

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and Shell (LEED™-CS) offered a suitable tool for the building type. Harbor Properties and Vulcan realized an opportunity, not only to be one of the first buildings certified under LEED™-CS, but also to support the development of the tool by providing valuable feedback as a pilot project.

While integrating LEED™ late in the process added a one percent premium, it was evaluated as a good investment in creating long-term value. Some of the additional costs were offset by incentives, including: \$20,000 through Seattle's LEED™ Incentive Program, and \$144,000 from Seattle City Light for energy conservation.

The design team focused on strategies that would provide operational savings and create a healthy environment for the tenants. Biotechnology research laboratories require a higher ventilation rate with 100 percent outside air. To reduce energy use, an innovative HVAC system was designed that recovers both waste heat and cooling with custom air handlers and sprayed heat pipes. The system allowed the boiler to be downsized by 50 percent and the chiller by 33 percent, significantly reducing capital costs when compared to a conventional laboratory system.

The whole building is served by a single Variable Air Volume fan system, designed to be more versatile and efficient than separate fan systems for office and lab spaces. CO2 sensors eliminate over-ventilation in the offices, and save 100kW during the heating season. Typically, lab spaces would receive 10 air changes per hour. SBRI's building operators contracted with an industrial hygienist to determine the number of air changes required in each lab based on activities. Air changes were adjusted to seven or eight per hour, and the savings will afford frequent return hygienist visits so the space remains properly ventilated.

Energy performance was also improved by high-performance, Low-e glazing, higher insulation values, and an integrated daylight and electric lighting design. Large windows allow ample daylight into the building, and internal and external shading devices help to control glare. To introduce more daylight into lab spaces, the north façade on floors 3-5 was set back 16 feet from the lot line. Electric lighting in the offices is automated with both daylight and occupancy sensors.

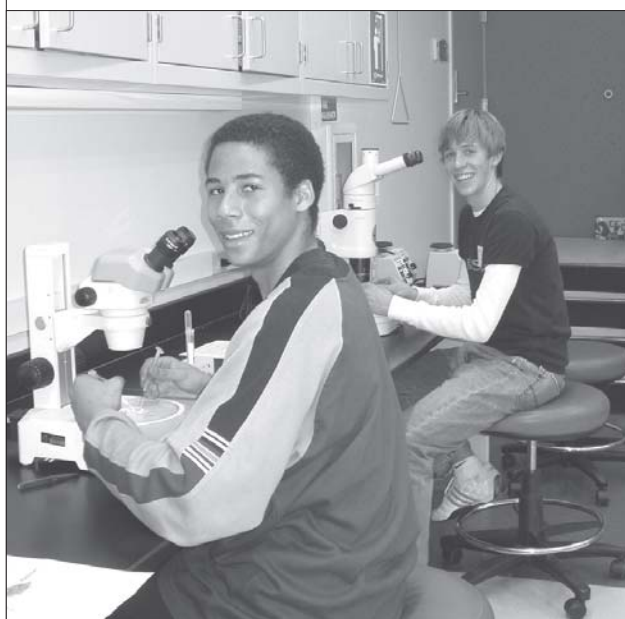
Domestic water use was reduced by 23 percent by installing waterless urinals. This strategy will save over 186,000 gallons and generate \$1,860 in savings each year. Permanent irrigation for landscaping was eliminated by selecting native and drought-tolerant plants that will rely on rainwater after they have been established.

Through these accomplishments, SBRI's green building has become a new strategy in its fight for global health.

SUSTAINABLE BUILDING

"The SBRI Building's success validates the business case for sustainable development—money saved through resource efficient features will translate to added income to advance the business goals of our tenants while sustaining potentially scarce resources for future generations."

—Ada Healey, Vice President Vulcan Real Estate



307 Westlake occupants will benefit from its South Lake Union location and spectacular views, as well as a working environment that features ample daylight, high-quality electric lighting, superior ventilation, and low-emitting materials.

For More Info

For more information on the SBRI Building at 307 Westlake visit www.vulcanrealestate.com and click on "Success Stories," or visit www.sbri.org/about/our_home.asp.

For more information about LEED™ for Core & Shell visit www.usgbc.org/LEED/leed_core_shell.asp.

See what DPD is doing to encourage green building at www.seattle.gov/dpd/sustainability or contact:

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